

# Ketan Patni

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SENIOR UNDERGRADUATE, MECHATRONICS, NMIMS - MUMBAI

## EDUCATION

**NMIMS Mukesh Patel School of Technology Management & Engineering**, Mumbai, India  
*Bachelor of Technology, Mechatronics* Jul' 17 - Jul' 21

**CGPA: 2.7/4**

**Relevant Courses:** Industrial Drives; Power Electronics; Theory of Machines; Strength of Materials; PLC and Data Acquisitions; Automotive Electronics; Product Design & Development

## RESEARCH EXPERIENCE

**Automated Trash compactor with auto seal mechanism**

*Supervisor : Prof. Deepak K Sinha*

*March '20 - Present*

- Designed and simulated an automatic trash compactor unit to compact the trash with a scissor mechanism and an auto seal mechanism to heat seal the garbage polythene
- Increased the efficiency, volume ( $\sim 30\%$ ) and sanitization standards of a bin

## MANUSCRIPT

**Patni, K., Shaikh, R., Mahajan, H., Sinha, DK. (2021). Automated Trash Compactor Bin with Auto-seal Mechanism - Review.**

**Completed review and selected for oral presentation in *International Conference on Communication, Information and Computing Technology (ICCICT-2021)***

## INDUSTRY EXPERIENCE

*Internship Student*

*May '18 - June '18*

- Worked in the Gear department to understand the manufacturing of various types of gears like spur, pinion and comprehended its manufacturing process from the beginning (i.e. facing and centering) to finish operations like gear-shaving
- Facilitated gear products by installing tools and fixtures on a hobbing machine, VMC and CNC
- Operated quality control instruments like TRIMOS, MAG tester to understand the concepts of lead, profile, and DIN of a gear

*Internship Student*

*May '20 - June '20*

- Assisted the plant head to audit the tool stock of the company
- Worked to comprehend the manufacturing process of 2 cylinder camshafts from the initial stage (facing & centering) to final operations like cam-grinding
- Gained knowledge about heat treatment processes like infra-red softening and induction hardening

## OTHER PROJECTS

**Student Participant, MPSTME Racing Team**

*Aug '17 - Jan '19*

- Assiduous participant of SAE BAJA, organized by Mahindra and Mahindra, ESI competition - a nationwide tournament where in more than 100 colleges from all over the country take part to fabricate an All-Terrain Vehicle(ATV) from the scratch
- Co-Driver of the vehicle and also a zestful member of the power train department

**Automated Color Sorter**

*Prof. Nirmal Thakur*

*Aug '18 - May '19*

- Built a system capable of sorting small objects based on their color
- Gained knowledge about servo-motors, color sensors and arduino micro-controller

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**SOFTWARES  
TOOLS**

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**Softwares:** Solidworks, MATLAB (basics)  
**Tools:** CNC, VMC - G Codes & M Codes (basics), 2D height guage (TRIMOS), MAG tester

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**EXTRA  
CURRICULARS**

- State level Badminton player with a highest state rank of 5
- 3 times winner of District Level and Marathwada level badminton tournament
- Awarded as sportsperson of the year 2014-2015 for my achievements in the field of badminton and for holding a marathon record in high school
- Took part in NGO named Arpan Social Group to distribute Food and essentials to the migrants during lockdown